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ABSTRACT

The possibility that children with learning disabilities often have problems in social areas is evaluated. A study to determine the peer popularity of children classified as having learning disabilities is presented. An analysis of variance was computed for votes received on scales of social attraction and social rejection by learning-disabled and comparison children matched on variables of sex, race, and classroom. The results indicated that learning-disabled children, particularly white and female, were significantly less attractive and more rejected than comparison children. Alternative interpretations of these results are evaluated. (TO)

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SOCIAL FACTORS IN READING DISABILITY

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It has long been recognized that children who fail to achieve academic skills manifest a wide variety of behavioral and interpersonal difficulties. Whether one studies the learning disabled or the reading failure, one thing is apparent, the children so labeled are often noted for their aversive behaviors. Such children are characterized as hyperactive, distractible, and having short attention spans; not to mention their aggressiveness, emotional liability, and their inability to delay gratification. There is not a virtue to be found on the list. It would seem reasonable to assume that children who are characterized as "infant King Kongs" (Wender, 1971) are experiencing interpersonal difficulties.

Perhaps it is surprising, but diagnosis and remediation efforts involving these children have been primarily directed toward the child's academic difficulties, rather than toward his interpersonal ones. Little professional effort has been devoted to the understanding and taming of the beast. The research project reported here represents the results of a number of studies addressed to the social relationships of learning disabled children, primarily defined as children with reading failures. Three areas have been of concern. How do adults and peers view or respond to such children? How do such children respond to peers? And, how sensitive are learning disabled children to the affective states of others?

The individual studies are now briefly described with the current state of the notion presented as a summary. First, however, let me describe the children who participated in the studies to be reviewed.

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Fifteen of 16 elementary school districts in Evanston School District 65 participated in the various projects. The sample pool consisted of all the learning disabled children in third, fourth and fifth grades who had IQs above 80 on an individually administered intelligence test and who were receiving part time daily assistance from a learning disability teacher. As such we had 84 children: 35 white males, 29 black males, 10 white and 10 black females. Control children were selected randomly from classmates who matched the learning disability subjects on sex and race. Metropolitan Reading and Mathematics Achievement percentile scores were available for all of the children. The reading and math scores of the learning disabled children were significantly lower than those of the control group (please see Table 1).

Study 1: Peer Attitudes. The first study was a test of the assumption that learning disabled children will be viewed as less desirable as playmates than other children. A sociometric scale was administered to all of the 62 third, fourth and fifth grade classrooms in which there was at least one learning disabled and one control. The scale was a combination of two well known techniques, the Moreno items and the Guess Who technique. Children were asked to name classmates for such items as: "name three children who are your friends...three children you do NOT want to sit next to in class...who finds it hard to sit still in class...who is handsome or pretty...". An initial data analysis was used to establish which items were significantly correlated, and the degree to which positive and negative statements were correlated. The positive items correlated +.47; the negative +.58; the negative correlated with the positive -.20. The correlations suggested that the positive directed items could be combined to form a Social Attraction measure; the negative direction items a Social Rejection measure; and that the two measures were sufficiently independent to be analyzed independently.

The scores of learning disabled and comparison subjects were derived on the basis of the number of classmates who nominated that subject on each item divided by the total number of votes cast on that item. These percentages were transformed into arc sine equivalents for a three way analysis of variance for group, sex and race. First, there was no significant main effect for race. Black children were neither more popular nor rejected than white children. There was a significant main effect for group as learning disabled subjects received significantly more votes on Social Rejection and significantly fewer votes on Social Attraction (please see Table 2). The main effect for group needs to be interpreted in light of significant interactions on group by race and group by sex. The group by sex interaction occurred on the Social Rejection scale as learning disabled girls received 13% of the votes compared to control girls 05%, learning disabled boys 09% and control boys 08% ($F=4.850$, $p < .05$). The group by race effect indicates that white learning disabled children receive the greatest number of rejection and the fewest acceptance ratings; whereas the white control children receive the fewest rejection and the most acceptance ratings. In effect learning disabled children, particularly white ones, or girls, are less accepted and more rejected than comparison peers. Their peers describe them as scared, unhappy, worried children who are not desirable playmates. The only item which failed to distinguish these groups of children was that designed to assess hyperactivity.

Study II: Replication of the sociometric study. In order to determine the peer status of such children on a longitudinal basis, the sociometric scale was readministered one year later to 20 classrooms in which there were 21 learning disabled boys and four learning disabled girls, all white.

The results replicated the first study as learning disabled children received 04% of the Attraction votes compared to control children's 10% ($F=3.866$, $p < .001$);

and learning disabled children received 11% of the Rejection votes compared to 05% for the controls ($F=14.003$, $p<.001$). There was no main effect or interactions for sex but there were only 4 girls. It should be noted that of these 20 classrooms, 9 classes in which there were 13 learning disabled subjects had undergone over 75% change in classmates and an additional six classrooms had changed composition 50-75%. Parenthetically, this is not lip-service rejection. There is evidence to suggest that learning disabled children are twice as likely to be ignored by classmates and teachers than comparison children (Bryan, 1974). The reading failure apprears to be a social failure as well.

Study 3: Behavioral correlates of Attraction and Rejection. The sociometric studies have demonstrated that the learning disabled child is relatively more rejected by his peers than are non-disabled children. Several investigations have yielded evidence which lead one to suspect that teachers do not like these children either. Keogh and Tchir (1972) found that teachers view the learning disabled child as aggressive and hyperactive, while Bryan and McGrady (1972) found that teachers describe them as less tactful and less socially acceptable than peers. Indeed, it would appear that even their parents are not particularly proud of them, indicating that they feel less affection for them than for their siblings (Owen, Adams, Forrest, Solz and Fisher, 1971).

The problem of course is to isolate those behaviors which produce such rejection by others. There is evidence which suggests that in general peer popularity and rejection among young children is related to positive and negative reinforcements. Social approval leads to popularity, reprimands lead to rejection (Hartup, Glazer and Charlesworth, 1967). Following this lead, it was decided to study the administration of reinforcements by learning disabled and control children to their peers within a laboratory setting.

Ninety of the children who participated on the first sociometric study served in this study. Thirty were learning disabled, thirty were classified "potential learning disabled" (on the basis of Metropolitan Reading Achievement percentile scores below 35) and thirty were controls (above the 35th percentile on the Metropolitan). These same children were subgrouped according to sociometric status. Popular subjects were those who were below the group mean on Rejection and above the mean on Attraction (N=30). Salient children were those who received a lot of votes on both Attraction and Rejection (scores above the group mean on both scales; N=14). Isolated children were those who received few scores from classmates on both Rejection and Attraction scales (N=29); while Rejected children were those who received a lot of votes on Rejection but few votes on Attraction (N=17, above the mean on rejection, below the mean on attraction).

Ninety second graders, matched to subjects for sex and race, were randomly selected to interact with the subject.

Each subject was brought individually to a laboratory trailer parked on school grounds and taught to play an experimental bowling game. After the child had a chance to play the game the experimenter told him that another child was coming to play the game, but she did not have enough time to teach the other child how to play. The subject was asked to teach the second grader to play the game while the experimenter left to run an errand. The interaction which took place while the second grader played the game was videotaped from an adjoining room by a concealed camera.

A behavioral interaction code was developed to analyze the interactions using a ten second time sampling method. Behaviors were coded as Social Interactions, Task Related Statements, Initiations to the subject, Initiations by the subject,

Help, Positive and Negative Reinforcements. Scores were computed by dividing the total number of ten second intervals in which a particular behavior occurred by the total number of intervals recorded. The percentages were transformed into arc sine equivalents for a two way analysis of variance for group (learning disabled, potential learning disabled and control) and for sociometric status (popular, salient, isolated and rejected).

Alas, there were no differences found on any of the behavioral dimensions for learning disabled, potential learning disabled and control groups. Likewise, positive reinforcements failed to distinguish groups or sociometric status groups. We did get a significant difference for sociometric groups for Negative Reinforcements. Of the four groups, only one, the Rejected, said anything negative, but this occurred so infrequently ($\bar{X}$=002%, F=4.951, p<003) that in spite of significant p level it is hard to get excited. Maybe it means that one need not be nasty very often to be rejected.

We did get one other significant result, but this was contrary to our expectations. There were sociometric group differences on making Task Related Statements as proportions of time engaged in this activity were Salient - 82%, Rejected - 81%, Popular - 62% and Isolated - 55% (F=2.650, p<.05). We had defined Task Related Statements as a type of helping behavior which would be welcomed by the younger child. It meant the subject was giving continued pointers on how to play the game and seemed to us intrinsically good. Why then would the two sociometric groups who receive the greatest amount of rejection be engaging in this presumably prosocial act significantly more than the groups which received the fewest votes for rejection. Reexamining the tapes it began to appear that continual instructions and helping behaviors interfered with and obstructed the second grader from his attempt to play the game. These acts began to look not helpful, but quite needlesome and intrusive.

On the whole, these results were very disappointing. Negative reinforcements hardly ever occurred, positive reinforcements were significant only in their insignificance, and task related statements looked aversive on a post hoc basis. More frustrating was that we believed we could see differences in the behaviors of the learning disabled and comparison children. We also recognized that we might be suffering an advanced case of experimenter bias. Rather than allow these insignificant F's to go unchallenged and a favored hypothesis to die quietly, we decided to see if we were hallucinating differences or whether other people unfamiliar with the project would see the same thing as we.

Study 4: Strangers' "Instant Diagnosis" of Learning Disabilities. We randomly selected 22 of the videotaped interactions, 11 involving the learning disabled, the remaining the control children. The quality of the tapes were far worse than Nixon's tapes. The microphone, placed beneath the bowling game, magnified the sound of the ball rolling down the alley, the sound of the fluorescent lights and airplanes passing by. The camera was stationary so if children moved out of range we could only guess what they were doing.

The tapes were shown to college students majoring in Secondary Education. They were asked to rate the children who played the teacher on 4 items each involving a seven point scale ranging from extreme agreement to extreme disagreement. The statements were concerned with the child's physical appearance, speech and language, his likely academic achievement, and his attractiveness to other children. Scores were tallied for each item and for the sum of the items, and a two way analysis of variance was computed to compare ratings received by learning disabled and control children and by the four groups of sociometric status. The results were that after viewing a 1½ to 4 minute film segment of two children playing a game, students who had no knowledge of the research could make accurate discriminations among learning

disabled and control children. Learning disabled children received significantly lower ratings than the control ones on ratings of speech and language ($F=6.860$, $p<.02$), academic achievement ($F=8.211$, $p<.01$), attractiveness to peers ($F=7.432$, $p<.01$) and the sum of the four items ($F=8.369$, $p<.01$). Physical attractiveness was the only item which did not distinguish among groups. There were no significant results for the sociometric status groups.

Thus, strangers to learning and reading problems, inexperienced at evaluation, inexperienced in dealing with young children, could view this short, poor quality tape of play behavior and differentiate learning disabled and comparison children. Just how these differentiations are made remains a mystery.

Study 5: Perception of nonverbal social communication: The Kiddiepons. Thus far measures have been described of adult and peer attitudes toward and perceptions of learning disabled and comparison children. In this next study the focus was placed upon learning disabled children's perceptions of others. For this purpose, a test was used which was devised by Professor Robert Rosenthal which has become known as the Kiddiepons. The test consists of a film and an audiotape. The film has forty segments which display an adult female expressing either positive or negative affect combined with dominance or submissive expressions. Examples of situations are: a) positive/dominant - an expression of motherly love; b) positive/submissive - expressions of gratitude; c) negative/dominant - nagging a child; d) negative/submissive - asking forgiveness. In addition to varying the affect and expressions, the presentation of the information is varied. The child views parts of the person as sometimes the face only is presented while on other segments the upper torso is viewed. The forty audio scenarios present the same affects as the film, but the messages have been made uninterpretable by removal of the high frequency sounds or by scrambling and resplicing the tape. The viewer is asked to

indicate on a questionnaire which one of two statements best describes the scenario. To ensure that children could read the questionnaire statements the machine was stopped immediately preceding the scenario and the statements read aloud by the experimenter.

The Kiddiepons was administered to 25 learning disabled and 11 control children. The results indicated significant differences in the accuracy of choices made. Control children performed with greater accuracy than learning disabled subjects. The normal children attained 67.8% accuracy; learning disabled children attained 60.1% accuracy ($F=13.77$, $p<.001$). There were no race differences, no interactions, and no significant modality differences although auditory accuracy was lower than video accuracy for both groups.

The State of the Notion. The results of the sociometric studies indicate that learning disabled children are less acceptable and highly rejected by peers. They are characterized as worried, scared, dirty, unhappy; they are not noted for hyperactivity. While there are significant reading and math achievement score differences between learning disabled and comparison children; these do not predict in any one to one fashion popularity or rejection ratings. Black learning disabled children have much lower reading and math scores than white learning disabled children, but they are not as rejected. The greatest rejection seems to be directed to white learning disabled females.

It is notable that this school district has had a racial integration program ongoing for five years, achieved by busing and staff integration. The children in this study, with the exception of one year of kindergarten for the fifth graders, have grown up in an integrated school environment. The data speaks very well for the success of the integration program as there were no main effects for race. Why then are white learning disabled children having the most difficult time inter-

personally? Are white children more rejected because they fail to meet others' expectancies of school achievement; while not so much is expected of black children? Are black and white children referred for special help, diagnosed and treated on basically different grounds?

In any case, college students "instant diagnosis" suggests that learning disabled children are behaving differently from and are seen as less desirable than comparison children. On a post hoc basis we believe that the differences being detected relate to two factors. One is language. We think learning disabled children differed from comparison children in their verbal ability to communicate a message accurately and completely. The second factor, we think, is the subjects' affective involvement with others. The learning disabled child appeared to be more egocentric and less able to understand and respond to the interests of others. The basis of this notion was the intrusive quality of learning disabled subjects behavior when they would take over the game by playing the younger child's trials, by continuing to pick up the ball for the other child, by repeating instructions after they had obviously been understood, or, by disengagement and disinterest in the younger child's fortunes.

That learning disabled children may be more egocentric and less attuned to the affective states of others was supported by the KIDDIEPONS data. The KIDDIEPONS results indicated that these children are less competent than peers in their perceptions of the affective states of others. Viewing audio and film representations of real life situations, the learning disabled children were less accurate in making judgments about the affect displayed.

Whatever you call them, learning disabilities or reading disabilities, it is clear that these children are experiencing very real difficulties in social development, in interpersonal relationships, in perceiving and understanding others'

affective states. It is also quite clear that teachers, parents, and peers make negative evaluations of these children although the bases upon which these negative judgments are made remain to be determined.

References

Bryan, T. "An observational analysis of classroom behaviors of children with learning disabilities," Journal of Learning Disabilities, 1974, 7, 26-34.

Bryan, T.S. & McGrady, H.J. "Use of a teacher rating scale," Journal of Learning Disabilities, 1972, 5, 199-206.

Hartup, W.W., Glazer, J.A., & Charlesworth, R. "Peer reinforcement and sociometric status," Child Development, 1967, 38, 1017-1024.

Keogh, B.K. & Tchir, C.A. "Teachers' perceptions of educationally high-risk children," Technical Report SERP 1972-A2. Graduate School of Education, University of California L.A., 1972.

Monroe, M. Children Who Cannot Read. Chicago: University of Chicago Press, 1932.

Owen, F.W., Adams, P.A., Forrest, T., Stolz, L.M., and Fisher, S. Learning disorders in children: Sibling studies. Monographs of the Society for Research in Child Development, 36, Serial No. 144, 1974.

Strauss, A. and Lehtinen, L. Psychopathology and Education of the Brain Injured Child. New York: Grune and Stratton, 1947.

Wender, P.H. Minimal Brain Dysfunction in Children. New York: Wiley-Interscience, 1971.

Metro Table 1

Metropolitan Reading and Mathematics Achievement Test Percentile Scores

	Reading *	Math
Learning Disabled Black	16.02	11.29
Learning Disabled White	23.42	26.36
Control Black	40.46	43.23
Control White	74.91	71.29

*	Reading		Math	
Race	F=32.709	p<.001	F=29.158	p<.001
Group	F=77.476	p<.001	F=69.744	p<.001

Table 2

Mean Percentages of Sociometric Scores

	Social Rejection Scale*		Social Acceptance Scale*	
	White	Black	White	Black
Learning Disabled	15	08	04	06
Control	05	09	10	07

*df	1,160	1,160
F	19,896	9,118
p	.001	.01